

HAWAII UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT MISSION NO. P5-432

MISSION STATUS

Location: Lanikai Open Fishing Area

Mission Date: 23 Sept 99

Maximum Depth: 426 m

Project Title: Evaluation of non-lethal methods for assessment of overfished deepwater snapper resources.

Principal Investigator: Robert B. Moffitt

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Scientific Data Acquired : Prepare an abstract outlining your objectives, techniques, findings, etc.

Objectives: The objectives of this dive were to conduct assessments of deepwater snapper resources off Lanikai, Oahu. The data obtained will be compared to similar data collected at an adjacent closed area off Makapuu as well as with similar data collected at the Lanikai location last year.

Techniques: Two techniques were employed to conduct this assessment:

- 1) 30 minute transects at 300 and 350 m depths
- 2) 30 minute "lights-out" bait station at 300m

Findings: When we first touched down at 426m we were on a sand covered bottom with carbonate reef showing through. We observed and collected a *Covallium regale* specimen at this site. As we moved up slope to 350 m, more and more carbonate showed through the sand. On the 350 m transect we observed 5 small ehu and a few forage fish (*Symphysanodon moanaluae* and *Grammatostus laysanus*), most of these at a large carbonate overhang at the end of the transect. There were

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starfish (mostly *Sphaeriodiscus ammophilus*), galatheid crabs and *Antipathes* sp 1 all along the transect. Moving up slope to 300m we observed 2 small ehu (~8-10") and 1 small onaga of similar size. The habitat on the 300m transect was largely low relief carbonate with fish concentrated around the larger overhangs and holes. We observed 17 ehu and 3 onaga along this transect. Scorpaenids (probably *Pontinus*) were very abundant (43 sited) as were *Symphysanodon moanaloeae* (~3000) and *Grammatonotus* (~300). We travelled back on this transect to conduct a bait station at 300m. At this station we collected a rare gastropod (*Sassia* sp) and observed a maximum of 7 ehu, 1 onaga, 2 Conger (*oligopus*?), 2 *Gymnothorax nattingi* (one dark + one light colored), 2 *Antigonia*, ~~and~~ 1 *Paramola*, and 3 *Squalus mitsukurini*. Traveling south to the beginning of two exploratory transects we observed ehu, onaga, *Pontinus*, *Symphysanodon*, *Grammatonotus*, etc. we also observed 21 *Beryx decadactylus* under a large overhang. The first exploratory transect started at 315m and ended at 345m. The bottom started out with scattered *Antipathes* on a low relief ^{sand covered} carbonate similar to that seen on the 300m transect. By the end the bottom had even lower relief features looking like heavily eroded carbonate reef. we observed 3 ehu, 1 *Beryx*, and ~200 *S. moanaloeae*. ~~among~~ On the second exploratory transect we started at 345m and ended at 319m. We started on an eroded carbonate bottom, traveled through an area with heavier sand veneer and back to a more exposed low relief carbonate bottom. Along this transect we observed few fish including 1 ehu and 1 onaga. We found two large patches of *Corallium secundum* and collected two specimens (one from each patch) for positive identification.

MISSION EVALUATION:

Limitations, failures, or operational problems noted:

The suction device worked rather poorly. There was enough suction power to lift the *Sassia* specimen into the hose, but not enough to bring it to the collection jar. We had similar problems earlier when attempting to collect crab specimens.

Recommendations for corrective action or improvement:

None

In your opinion, did the mission essentially achieve its purpose? Compare actual work accomplished with the work that was expected to be accomplished.

Yes. We completed all of our dive missions and made successful collections of the specimens listed below as well.

List specimens or samples collected on the mission.

Sassia sp 1 specimen
Corallium secunda 2 specimens
Corallium regale 1 specimen.

DATA RELEASE

Data may be retained by the project leader for up to 2 years after the mission date with the following exception. NOAA may request to use photos for publication or publicity purposes at any time.

Fill in the appropriate statement below and sign this form.

I hereby release the data archived by HURL for public consumption following mission

Evaluation of non-lethal methods for assessment (project title)

held on 23 Sept 1999 (date) in the following way:

- a. CTD data by 23 Sept 2001 (date)
- b. voice transcripts, video, and still camera film by 23 Sept 2001 (date)
- c. other 23 Sept 2001 (date)
- d. I will give my written consent to individuals wishing to use these data prior to the above dates depending on the nature of the request(s).

Robert B. Maffitt Principal Investigator